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Faculty Vita

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Education:

Ph.D. University of Alabama Huntsville, 1997
MSME Pennsylvania State University, 1993
BSAE Pennsylvania State University, 1991

Related Experience (Teaching, Industrial, etc.):

NRC Postdoctoral Associate, Naval Postgraduate School, 1997

Institutional and Professional Service (Last 5 Years):

Treasurer/Secretary, AIAA Point Lobos Section, 1999-2001

Scientific and Professional Society Membership:

American Institute of Aeronautics and Astronautics
American Society of Mechanical Engineers

Principal Publications (Last 5 Years):

- Sinibaldi, J., Brophy, C.M., C. Li, and K. Kailasanath, "Investigation of Detonation Wave Diffraction During the Ignition of Pused Detonation Engines," *2nd Joint Meeting of the Combustion Institute*, March 25-28, 2001.
- Brophy, C.M., Netzer, D.W., Sinibaldi, J., "Operation of a JP10/Air Pulse Detonation Engine," Preprint AIAA-00-3591, *36th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit*, Huntsville, Alabama, July 16-19, 2000.
- Sinibaldi, J. and Brophy, C.M., and Robinson, J., "Ignition Effects on Deflagration-to-Detonation Transition in Gaseous Mixtures," Preprint AIAA-00-3590, *36th Joint Propulsion Conference and Exhibit*, Huntsville, Alabama, July 16-19, 2000.
- Brophy, C.M., Hofstedt, T., Netzer, D.W., "Detonation of a JP-10/Aerosol for Pulse Detonation Applications," *International Colloquium on the Control of Detonation Processes*, Elec-KM Consulting Company, Moscow July 4-7, 2000.
- Brophy, C.M., Scruton, Z.M., Johnson, C.W., "Measurements of Fuel Additive Effects on the Soot Mass Loading in Oxygen/Kerosene Exhaust Plumes," *2000 JANNAF Exhaust Plume Technology Subcommittee Meeting*, Nellis AFB, Las Vegas, Nevada, May 15-19, 2000.
- Venner, M.J., Johnson, C.W., Brophy, C.M., "Signature Characterization of a Small Liquid Rocket Engine Burning Various Kerosene-Based Fuels," *Military Sensing Symposia*, MD-SEA, SPAWAR Systems Center, Charleston, South Carolina, January 25-27, 2000.

- Brophy, C.M., and Netzer, D.W., "Operations, Performance, and Characteristics of a Liquid-Fueled Pulse Detonation Engine," ISABE Paper IS-136, *XIV International Society of Airbreathing Engines (ISABE) Conference*, Florence, Italy, September 5-10, 1999.
- Brophy, C.M., and Netzer, D.W., "Effects of Head-End Geometry and ignition Location on the Operation of a JP-10/02 Fueled Pulse Detonation Engine," *17th International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDNS) Meeting*, Heidelberg, Germany, 1999.
- Brophy, C.M., and Netzer, D.W., "Effects of Ignition Characteristics and Geometry on the Performance of a JP-10/02 Fueled Pulse Detonation Engine," Preprint AIAA-99-26335, *35th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit*, Los Angeles, California, June 20-23, 1999.
- Johnson, C.W., Venner, M.J., and Brophy, C.M., "Radiative Heat Transfer Effects on Soot Production," *MSS Symposium*, Monterey, California, January 1999.
- Nickerson, G.R., Johnson, C.W., and Brophy, C., "Prediction of Soot Produced in Kerosene Fueled Rocket Engines," *35th JANNAF Combustion Subcommittee Meeting*, Tucson, Arizona, December 7-11, 1998.
- Silva, S., Brophy, C.M., and Netzer, D., "Measurement of Soot in Oxygen/Kerosene Exhaust Plumes," *24th JANNAF Exhaust Plume Technology Subcommittee Meeting*, Kennedy Space Center, Florida, November 9-13, 1998.
- Brophy, C.M., Netzer, D.W., and Forester, D., "Detonation Studies of JP-10 with Oxygen and Air for Pulse Detonation Engine Development," Preprint AIAA-98-4003, *34th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit*, Cleveland, Ohio, July 13-15, 1998.
- Brophy, C.M., and Hawk, C.W., "Cold Flow Imaging of CH₄/Air Mixing in a Four-inlet Ducted Rocket Engine Combustor," *Journal of Flow Visualization and Image Processing*, vol. 6, no. 1, 1999.
- Brophy, C.M., and Hawk, C.W., "Flow Visualization of Four-Inlet Ducted Rocket Engine Configurations," *Journal of Flow Visualization and Image Processing*, vol. 3, no. 1, 1997.
- Brophy, C.M., et al., "An Investigation of Four-Inlet Ducted Rocket Engine Flameholding Characteristics," Preprint AIAA-97-2846, *33rd AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit*, Seattle, Washington, July 6-9, 1997.
- Brophy, C.M., and Hawk, C.W., "Mixing and Combustion Studies of Four-Inlet Side Dump Combustors," Preprint AIAA-96-2765, *32nd AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit*, Lake Buena Vista, Florida, June 28-30, 1996.